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COOLEY GODWARD, LLP
3000 EL CAMINO REAL
5 PALO ALTO SQUARE
PALO ALTO, CA 94306

EXAMINER

WEST, LEWIS G

ART UNIT PAPER NUMBER

2682

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/438,215

Applicant(s)

NEVO ET AL.

Examiner

Lewis G. West

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7,9. 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13 and 14 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 13 and 14 it must be indicated that the reference is to IEEE 802.11 protocol, merely stating 802.11 is not sufficient, and the specific protocol (a, b, etc.) must be claimed, else the scope of the claim is not defined. There are many protocols under IEEE 802.11. Further 802.11(a) and 802.11 (b) should also be referred to as IEEE 802.11(a) and IEEE 802.11(b). Correction is required.

Regarding claims 21-23 which are method claims, applicant lists them as dependent from claim 13, which is an apparatus claim. It is therefore assumed for examination that they depend from claim 15 which is the nearest independent method claim. Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4-6,10 is rejected under 35 U.S.C. 102(e) as being anticipated by Joersson (WO 99/29126).

Regarding claim 1, Joerrson discloses an apparatus comprising: a wireless transceiver to transmit and receive signals in accordance with a first protocol to and from first other apparatuses of a first wireless network; a wireless receiver to receive signals transmitted in accordance with a second protocol by second other apparatuses of a second wireless network; (page 8 line 27-page 9 line 11) and a controller manager coupled to the wireless transceiver and receiver to control operation of the wireless transceiver based at least in part on one signaling characteristic of said received signals from said second other apparatuses of the second wireless network, to reduce interference with said second other apparatuses of the second wireless network. (Page 11 line 5-page 12 line 7)

Regarding claim 2, Joerrson discloses the apparatus of claim 1, wherein said second protocol is a frequency hopping protocol comprising a plurality of frequencies employed in accordance with a pseudo random pattern, and the controller manager includes logic to ascertain the pseudo random frequency hopping pattern using said received signals from said second other apparatuses. (Page 4 line 21-page 5 line 2)

Regarding claim 4, Joerrson discloses the apparatus of claim 1, wherein said second protocol is a constant frequency protocol, and the controller manager includes logic to ascertain the constant frequency using said received signals from said second other apparatuses. (Page 11 line 5-page 12 line 7)

Regarding claim 5, The apparatus of claim 4, wherein the controller manager further includes logic to predict when interference with said second other apparatuses of said second wireless network will occur, based on said ascertained constant frequency. (Page 11 line 5-page 12 line 7)

Regarding claim 6, Joerrson discloses the apparatus of claim 1, wherein the controller manager further includes logic to suspend operation of said wireless transceiver to avoid interference with said second other apparatuses of said second wireless network, whenever interference is predicted to occur. (Page 12 lines 9-22)

Regarding claim 10, Joerrson discloses the apparatus of claim 1, wherein the controller manager further includes logic to preemptively notify one or more of said first other apparatuses, interference is predicted to occur. (Page 11 line 5-page 12 line 7)

Regarding claim 11, Joerrson discloses the apparatus of claim 10, wherein the controller manager further includes logic to preemptively notify said one or more of said first other apparatuses, a selected one of suspending operation to avoid interference with said second other apparatuses and applying filtering to cancel interfering signals from said second other apparatuses. (Page 11 line 5-page 12 line 7)

Regarding claim 15, Joerrson discloses, in a wireless apparatus having a wireless transceiver and a wireless receiver, a method of operation comprising: (a) receiving signals transmitted in accordance with a first protocol by first other apparatuses of a first wireless network; (b) determining at least one signaling characteristic of said received signals from said first other apparatuses; and (c) operating said wireless transceiver to transmit and receive signals in accordance with a second protocol to and from second other apparatuses of a second wireless

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network, based on said at least one determined signaling characteristic of said received signals from said first other apparatuses, to reduce interference with proximately located ones of said first other apparatuses of the first wireless network. (Page 8 line 27-page 9 line 11; page 11 line 5-page 12 line 7)

Regarding claim 16, Joerrson discloses the method of claim 15, wherein said first protocol is a frequency hopping protocol comprising a plurality of frequencies employed in accordance with a pseudo random pattern, and the method further comprises ascertaining the pseudo random frequency hopping pattern using said received signals from said first other apparatuses. (page 4 line 21-page 5 line 2)

Regarding claim 18, the method of claim 15, wherein said first protocol is a constant frequency protocol, and the method further comprises ascertaining the constant frequency using said received signals from said first other apparatuses. (Page 11 line 5-page 12 line 7)

Regarding claim 19, the method of claim 18, wherein the method further comprises predicting when interference with said first other apparatuses of said first wireless network will occur, based on said ascertained constant frequency. (Page 11 line 5-page 12 line 7)

Regarding claim 20, Joerrson discloses the method of claim 15, wherein the method further comprises suspending operation of said wireless transceiver to avoid interference with said first other apparatuses of said first wireless network, whenever interference is predicted to occur. (Page 12 lines 9-22)

Regarding claim 24, the method of claim 15, wherein the method further comprises preemptively notifying one or more of said second other apparatuses, interference is predicted to occur. (Page 11 line 5-page 12 line 7)

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Regarding claim 25, The method of claim 24, wherein the method further comprises preemptively notifying said one or more of said second other apparatuses, a selected one of suspending operation to avoid interference with said first other apparatuses and applying filtering to cancel interfering signals from said first other apparatuses. (Page 11 line 5-page 12 line 7)

Regarding claim 27, Joerrson discloses a collection of apparatuses comprising: a first plurality of apparatuses equipped to communicate wirelessly in accordance with a first protocol; and a second plurality of apparatuses equipped to communicate wirelessly in accordance with a second protocol, wherein at least one of the second plurality of apparatuses is further equipped to receive signals transmitted in said first protocol, and determine at least one signaling characteristics of said received signals transmitted in accordance with said first protocol, and to reduce interference with proximately located one or ones of said first plurality of apparatuses based on said determined at least one signaling characteristics of said received signals transmitted in accordance with said first protocol. (page 8 line 27-page 9 line 11;page 11 line 5-page 12 line7)

Regarding claim 28, Joerrson discloses the collection of apparatuses of claim 27, wherein the at least one of the second plurality of apparatuses includes logic to predict an interference with said first plurality of apparatuses is to occur. (Page 12 lines 9-22)

Regarding claim 29, Joerrson discloses the collection of apparatuses of claim 27, wherein the at least one of the second plurality of apparatuses includes logic to suspend transmit operation to avoid interference with said first plurality of apparatuses, whenever an interference with said first plurality of apparatuses is predicted to occur. (Page 12 lines 9-22)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Joersson in view of examiner's Official Notice

Regarding claim 13, Joerrson discloses the use of Bluetooth as one protocol and a mobile communication as another protocol. Examiner takes official notice that it was notoriously well known in the art at the time of the invention that the IEEE 802.11 protocols and Home RF are well known mobile communication protocols. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any of these protocols in the system to use the advantages these various systems have in communications.

Regarding claim 14, Joerrson discloses the use of Bluetooth as one protocol and a mobile communication as another protocol. Examiner takes official notice that it was notoriously well known in the art at the time of the invention that the IEEE 802.11 protocols and Home RF are well known mobile communication protocols. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any of these protocols in the system to use the advantages these various systems have in communications.

4. Claims 3, 12, 17 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Joerrson in view of Takahashi.

Regarding claim 3, Joerrson discloses the apparatus of claim 2, discloses an apparatus wherein the controller manager further includes logic to predict when interference with said second other apparatuses of said second wireless network will occur, but does not disclose prediction based on said ascertained pseudo random frequency hopping pattern. Takahashi discloses an apparatus for predicting interference based on a pseudo random frequency-hopping pattern. (Col. 3 lines 9-49) It would have been obvious to one of ordinary skill in the art at the time of the invention to predict interference based on a frequency-hopping pattern in order to prevent interference and interrupted communications.

Regarding claim 12, The apparatus of claim 1, wherein the controller manager further includes logic to request one of said first other apparatuses to preemptively provide notification of a predicted occurrence of an interference with said second other apparatuses. Takahashi discloses an apparatus for predicting interference based on a pseudo random frequency-hopping pattern. (Col. 3 lines 9-49) It would have been obvious to one of ordinary skill in the art at the time of the invention to predict interference based on a frequency-hopping pattern in order to prevent interference and interrupted communications.

Regarding claim 17, the method of claim 16, wherein the method further comprises predicting when interference with said first other apparatuses of said first wireless network will occur, based on said ascertained pseudo random frequency hopping pattern. Takahashi discloses an apparatus for predicting interference based on a pseudo random frequency-hopping pattern. (Col. 3 lines 9-49) It would have been obvious to one of ordinary skill in the art at the time of the

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invention to predict interference based on a frequency-hopping pattern in order to prevent interference and interrupted communications.

Regarding claim 26, The method of claim 15, wherein the method further comprises requesting one of said second other apparatuses to preemptively provide notification of a predicted occurrence of an interference with said first other apparatuses. Takahashi discloses an apparatus for predicting interference based on a pseudo random frequency-hopping pattern. (Col. 3 lines 9-49) It would have been obvious to one of ordinary skill in the art at the time of the invention to predict interference based on a frequency-hopping pattern in order to prevent interference and interrupted communications.

5. Claims 7-9, 21-23 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joerrson in view of Finman (US 5,117,377)

Regarding claim 7, the apparatus of claim 1, but does not disclose filtering based wherein the controller manager further includes logic to determine filtering to be employed, whenever an interference is predicted to occur, to cancel interfering signals from said second other apparatuses. Finman discloses an apparatus for canceling predicted interference. (Col. 26 line 38- col. 27 line 11) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to cancel predicted interference in order to avoid interrupted communications.

Regarding claim 8, the combination of Joerrson and Finman discloses the apparatus of claim 7, wherein the controller manager includes logic to determine a notch filter, inversely

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formed in accordance with transmit signals of said second other apparatuses. (Finman col. 26 line 38-col. 27 line 11)

Regarding claim 9, the combination of Joersson and Finman discloses the apparatus of claim 7, wherein the controller manager includes logic to employ said filtering to cancel interfering signals of said second other apparatuses of said second wireless network, whenever an interference is predicted to occur. (Finman Col. 26 line 38-col. 27 line 11)

Regarding claim 21, the method of claim 15, wherein the method further comprises determining filtering to be employed, whenever interference is predicted to occur, to cancel interfering signals from said first other apparatuses. Finman discloses an apparatus for canceling predicted interference. (Col. 26 line 38-col. 27 line 11) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to cancel predicted interference in order to avoid interrupted communications.

Regarding claim 22, the combination of Joersson and Finman discloses the method of claim 21, wherein the method further comprises determining a notch filter, inversely formed in accordance with transmit signals of said first other apparatuses. (Finman Col. 26 line 38-col. 27 line 11)

Regarding claim 23, the combination of Joersson and Finman discloses the method of claim 21, wherein the method further comprises employing said filtering to cancel interfering signals of said first other apparatuses of said first wireless network, whenever interference is predicted to occur. (Finman Col. 26 line 38-col. 27 line 11)

Regarding claim 30, The collection of apparatuses of claim 27, wherein the at least one of the second plurality of apparatuses includes logic to applying filtering to cancel interfering

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signals of said first plurality of apparatuses, whenever an interference with said first plurality of apparatuses is predicted to occur. Finman discloses an apparatus for canceling predicted interference. (Col. 26 line 38-col. 27 line 11) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to cancel predicted interference in order to avoid interrupted communications.


Conclusion


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hall (US 5,299,228) is cited as disclosing a system with a transceiver and receiver whereby information received in one protocol is used in interference prevention with nearby devices.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 703-308-9298. The examiner can normally be reached on Monday-Thursday 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


Lewis West
(703) 308-9298
August 21, 2003


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
8125103